

Amendment and Response

Applicant: Irwin Aberin et al.

Serial No.: 10/588,927

Filed: August 3, 2007

Docket No.: I431.168.101/FIN581PCT/US

Title: SEMICONDUCTOR PACKAGE WITH PERFORATED SUBSTRATE

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed May 7, 2009. Claims 1-16 have been previously cancelled without prejudice. Claims 17-36 were rejected. Claim 25 was objected to. With this Response, claims 17, 21-24, 30, 32, and 33 have been amended, and claims 18, 26, and 35 have been cancelled without prejudice. Claims 17, 19-25, 27-34, and 36 remain pending in the application and are presented for reconsideration and allowance.

Claim Objections

Claim 21-24, 30, and 32 were objected to for grammatical informalities.

With this Response, claims 21-24, 30, and 33 have been amended as suggested by the Examiner so as to correct the identified informalities. As such, Applicants respectfully request that the objections to claims 21-24, 30, and 32 be withdrawn.

Claim Rejections under 35 U.S.C. § 112

Claims 17-21, 24-29, and 33-36 were rejected under 35 U.S.C. 112, second paragraph, for reciting the limitation “will be”.

With the Response, claims 17, 24, and 33 were each amended, as described above, so as to eliminate the limitation “will be”. As such, Applicants respectfully request that the rejections of claims 17, 24, and 33, as well as claims 18-21, 25-29, and 34-36 depending respectively therefrom, under 35 U.S.C. 112, second paragraph, be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claims 17-19, 24-28, and 30-32 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,014,318 to Takada (“Takada”).

Applicants respectfully submit that Takada fails to teach or suggest the method as defined by independent claim 17. Takada, with reference to Figures 6-9 and 11 describes a solder resist layer 5 only on a bottom surface of a substrate 1, **not a solder resist layer on both the bottom**

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surface and on the top surface of the substrate as defined by independent claim 17.

Additionally, Takada discloses closing an end of the vent holes 7 on a lower surface of substrate 1 which is opposite the upper surface on which semiconductor chip 1 is mounted, **not a solder resist layer on the upper surface of the substrate which closes an end of the vent holes at the upper surface, the chip mounting area being on the upper surface**, as defined by independent claim 17. Furthermore, Takada, with reference to Figure 11, clearly teaches that vent holes 7 are disposed only in areas adjacent to semiconductor chip 2 (i.e. around the perimeter of semiconductor chip 2), **not forming vent holes through the substrate in both a semiconductor chip mounting area defined on the upper surface and in areas of the substrate adjacent to the semiconductor chip mounting area**, as defined by independent claim 17.

In light of the above, Applicants respectfully submit that Takada clearly fails to anticipate the method as defined by independent claim 17. As such, Applicants respectfully request that the rejection of independent claim 17 under 35 U.S.C. 102 over Takada be withdrawn and that independent claim 17 be allowed.

Independent claims 24 and 30 each include limitations similar to those described above with respect to independent claim 17. As such, for at least reasons similar to those remarked upon above with respect to independent claim 17, Applicants respectfully request that the rejections of independent claim 24 and 30 under 35 U.S.C. 102 over Takada also be withdrawn and that independent claims 24 and 30 be allowed as well.

Since claims 18 and 19 depend from and further define patentably distinct independent claim 17, claims 25-28 depend from and further define patentably distinct independent claim 24, and claims 31 and 32 depend from and further define patentably distinct independent claim 30, Applicants respectfully request that the rejections of dependent claims 18, 19, 25-28, 31 and 32 under 35 U.S.C. 102 over Takada also be withdrawn and that dependent claims 18, 19, 25-28, 31 and 32 be allowed as well.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 17, 19-25, 27-34, and 36 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 17, 19-25, 27-34, and 36 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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